

Appl. No.: 10/755,123
Amdt. dated 04/20/2006
Reply to Office action of January 23, 2006

REMARKS/ARGUMENTS

In light of the following amendments and remarks, reexamination and reconsideration of this application, withdrawal of the rejections, and formal notification of the allowability of all claims as presented are earnestly solicited. As detailed in the Office Action mailed January 23, 2006, Claims 1-43 are pending, wherein Claims 1-43 have been rejected. In response to the Office Action, the Applicant has amended Claims 1, 15, 26, and 38 to clarify the subject matter being claimed. The amendments to the claims find support throughout the Specification and the Drawings, and no new matter has been added. As such, the Applicants believe that the claims now define patentable subject matter over the prior art cited in the Office Action and notice to such effect is requested at the Examiner's earliest convenience.

Claim Rejections – 35 U.S.C. §102

Claims 1-9, 14-20, 25-32, and 37-43 were rejected in the Office Action as being anticipated by U.S. Patent No. 6,026,692 to Brovold. In response, the Applicants have amended independent Claims 1, 15, 26, and 38, upon which Claims 2-9, 14, 16-20, 25, 27-32, 37, and 39-43 depend, to clarify the subject matter being claimed. The amendments to the claims find support throughout the Specification and the Drawings such as, for example, from Page 18, line 28 through Page 20, line 15 of the Specification and in Figures 3-5. As such, no new matter has been added.

The Brovold '692 patent discloses a gyratory compaction apparatus for creating compression and shear forces in a sample material, and uses a single roller to accomplish the gyration and comprises a hollow cylinder mold including first and second end plates in slidable engagement with the mold at respective first and second open ends, with a chamber inside the mold for receiving the sample material. A support frame has an interior suitable for receiving the mold therein. A compression mechanism compresses the sample material. A gyratory assembly comprises a rotational drive motor having a drive shaft aligned along the longitudinal axis of the support frame interior, a cam mounted at the end of the drive shaft, a gyratory plate having an inner housing for encompassing and operably engaging the cam including a spring

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biased plunger operably engaging the cam and a first outer angular contact bearing for operably engaging the mold inner surface, and a driven plate operably mounted to the support frame with a second angular contact bearing and operably coupled to the gyratory plate with a pin mounted eccentric to the longitudinal axis of the cylindrical interior and an annular planar thrust bearing concentric to the pin so that when the cam is driven in a first direction the gyratory plate is rotated concentrically about the longitudinal axis of the cylindrical interior. When the cam is driven in an opposite second direction, the cam engages the plunger pivoting the gyratory plate about the axis of the pin, radially displacing the gyratory plate and first angular contact bearing so that the gyratory plate rotates eccentric to the longitudinal axis while the first angular contact bearing tilts the mold to a specified angle relative to the longitudinal axis of the housing and gyrates the mold about the specified angle while the sample material is compressed within the mold.

The gyratory compaction control module 24 includes a first mold angle transducer 160, a second mold angle transducer 166, a wire connection 164 to angle transducer 160, a wire connection 170 to angle transducer 166, a load cell wire connection 172, and a cylinder rod position wire connection 174. The angle transducer 160 includes a plunger 162 spring biased so as to continuously rest the tip of plunger 162 against the outer surface of cylinder wall 36. The angle transducer 166 has a similar plunger 168 also spring biased to maintain constant contact between the tip of plunger 168 and the outer surface of cylinder wall 136. The angle transducers 160 and 166 are linearly spaced and are separated vertically along housing wall 30. A plurality of pairs of angle transducers may also be spaced sequentially about a cylinder housing 12.

MPEP §2131 recites that, in order to anticipate a claim, a reference must teach every element of the claim.

In this regard, each of Claims 1 and 15 particularly recites a mold-engaging device for receiving and axially moving the mold with respect to the frame. The Brovold '692 patent does not disclose, teach, or suggest such a mold-engaging device adapted to receive and axially move the mold with respect to the frame.

Further, Claims 1, 15, 26, and 38, as amended, each particularly recite an offsetable member configured to be capable of engaging the second end of the mold, and of being laterally

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displaced from the frame axis and concurrently movable in an orbital motion about the frame axis, such that the mold is configured to be gyrated and dynamically maintained at a selected gyration angle related to the lateral displacement of the offsetable member, the gyration point, and the frame axis. The Brovold '692 patent does not disclose, teach, or suggest such an offsetable member configured to be capable of engaging the second end of the mold, and of being laterally displaced from the frame axis and concurrently movable in an orbital motion about the frame axis, such that the mold is configured to be gyrated and dynamically maintained at a selected gyration angle related to the lateral displacement of the offsetable member, the gyration point, and the frame axis.

In support of such distinctions, the Applicants submit that the amount of the asphalt sample deposited in the mold of a gyratory compactor may vary. In addition, the compressability of that asphalt sample may also vary. However, the gyration angle is determined by the axial location of the pressure ram along the axis of the mold, in relation to the lateral displacement of the offsetable member in relation to the apparatus axis. In this regard, embodiments of the present invention recognize the desirability and advantages to the gyration angle being monitored and dynamically adjusted during the gyratory compaction process. In doing so, such embodiments dynamically adjust the lateral displacement of the offsetable member in relation to the apparatus axis so as to dynamically maintain a specified gyration angle during the gyratory compaction process. In contrast, the Brovold '692 patent discloses an apparatus whereby a cam mechanism displaces a gyratory plate upon rotation thereof in a gyratory direction, to a particular displacement that provides a particular gyration angle. If the initial setting of the device according to the Brovold '692 patent does not provide a resulting gyration angle within a particular range of gyration angles, the apparatus must be stopped and the displacement of the gyratory plate by the cam mechanism must be adjusted until the desired gyratory angle is attained. As such, the device according to the Brovold '692 patent does not dynamically maintain a specified gyration angle, as particularly recited by Claims 1, 15, 26, and 38 of the present application.

The Applicants thus submit that there is no identity between the disclosure of the Brovold '692 patent and Claims 1, 15, 26, and 38 now pending in the present application. As such,

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Claims 1, 15, 26, and 38, as well as Claims 2-9, 14, 16-20, 25, 27-32, 37, and 39-43 which depend therefrom, are patentable over the Brovold '692 patent. As such, the Applicants respectfully request withdrawal of these rejections.

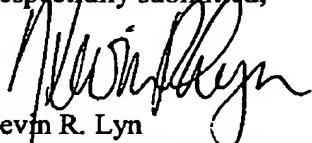
Conclusion

In summary, the Brovold '692 patent **does not** disclose, teach, or suggest the embodiments of the present invention as now claimed in Claims 1, 15, 26, and 38. Accordingly, in view of these differences between the Applicants' invention and the Brovold '692 patent, it is submitted that the present invention, as defined by the pending claims, is patentable over the prior art cited in the Office Action. As such, Claims 1-43 are believed to be in condition for immediate allowance.

In conclusion, for the reasons set forth above, the Applicant submits that all claims now pending are in condition for immediate allowance. Accordingly, notice to such effect is respectfully requested at the Examiner's earliest opportunity.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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